

Coil surge suppression units SZ-Z

■ **Description**

This unit suppresses coil surge voltage due to contactor ON-OFF operations. This unit can be easily connected to contactor coil terminals.

Varistor types cut the peak value of surge voltages and CR types suppress rapid increases of surge voltage.

Standard type contactors SC-N6 to N16 are provided with surge suppression devices.

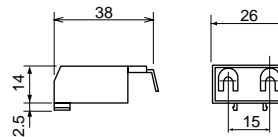
Coil surge suppression unit (for SC-03 to 5-1, SC-N1 to N5A)

Type	Device	Coil voltage	Used with
SZ-Z1	Varistor	24–48V AC/DC	SC-03 to 5-1 SC-03/G to 5-1/G
SZ-Z2	Varistor	100–250V AC/DC	
SZ-Z3	Varistor	380–440V AC	
SZ-Z4	CR	24–48V AC/DC	SC-N1 to N3 SC-N1/G to N3/G
SZ-Z5	CR	100–250V AC/DC	
SZ-Z6 *	Varistor	24–48V AC/DC	
SZ-Z7 *	Varistor	100–250V AC/DC	
SZ-Z8 *	CR	24–48V AC/DC	
SZ-Z9 *	CR	100–250V AC/DC	
SZ-Z31	Varistor	24–48V AC/DC	SC-N1 to N3 SC-N1/G to N3/G
SZ-Z32	Varistor	100–250V AC/DC	
SZ-Z33	Varistor	380–440V AC	SC-N1 to N3
SZ-Z34	CR	24–48V AC	SC-N1 to N3
SZ-Z35	CR	100–250V AC	
SZ-Z36	CR	24–48V DC	SC-N1/G to N3/G
SZ-Z37	CR	100–250V DC	
SZ-Z41	Varistor	24–48V AC/DC	SC-N4, N5A SC-N4/G, N5/G
SZ-Z42	Varistor	100–250V AC/DC	
SZ-Z43	Varistor	380–440V AC	SC-N4, N5A
SZ-Z44	CR	24–48V AC	
SZ-Z45	CR	100–250V AC	
SZ-Z46	CR	24–48V DC	SC-N4/G, N5/G

Note: * With LED operating indicator

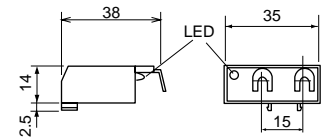


■ **Dimensions, mm**
SZ-Z1 to Z5
SZ-Z24, Z25



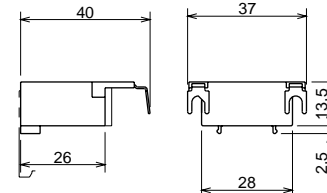
Mass: 14g

SZ-Z6 to Z9



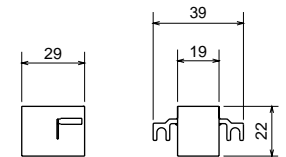
Mass: 16g

SZ-Z31 to Z37



Mass: 15g

SZ-Z41 to Z46



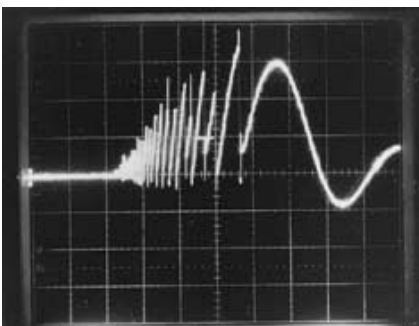
Mass: 15g

■ **Characteristics(coil rated 200V AC)**

● **Without coil surge suppression unit**

When current through a coil is interrupted, the sudden change of coil current, induces an abrupt surge voltage due to the coil inductance. The surge voltage sometimes produces noise which can damage or cause adjacent electronic devices to malfunction.

SC-0 (0.1msec/div, 1000V/div)
 200V AC coil

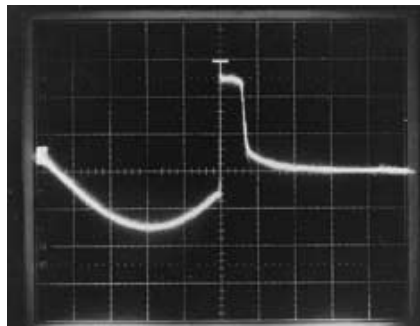


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● **With coil surge suppression unit Varistor type**

A surge voltage that exceeds a certain value causes a current to flow through the varistor connected in parallel with the coil, thereby suppressing peaks of the surge voltage. This surge suppression unit can be used in both AC and DC circuits.

SC-0+SZ-Z2 (2msec/div, 200V/div)
 200V AC coil



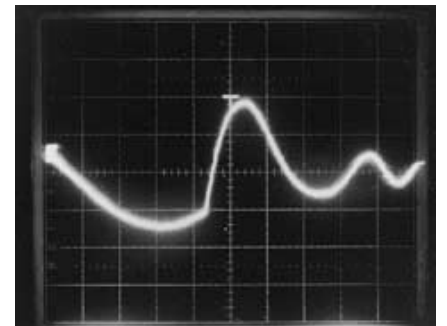
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● **With coil surge suppression unit CR type**

A CR (Capacitor-resistor) circuit connected in parallel with the coil suppresses the abrupt increase of surge voltage (dv/dt characteristics) by lowering the surge voltage oscillation frequency.

This surge suppression unit can be used in both AC and DC circuits.

SC-0+SZ-Z5 (2msec/div, 200V/div)
 200V AC coil



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